## Fire Code TAG – School Issues Federal Way City Hall Draft Meeting Notes January 24, 2014

Meeting called to order at 10:05 a.m.

**TAG members present:** Dave Kokot, Chair; Allen Spaulding; Barbara McMullen; Corey Thomas; Daniel Shier; Jim Kambietz; Margie O'Brien; Michael Montgomery; Shawn Shepherd

**TAG members absent:** Dave Nelson; Diane Glenn; Hank Teran; Joe Puckett; Lee Bailey; Robert Eaker

A quorum was present.

## **Guests present:**

Keith Merritt, Washington Association of Sheriffs and Police Chiefs
Ryan Fujiwara, Puget Sound School Coalition/Northshore School District
Todd Horenstein, Vancouver Public Schools
Jim Hansen, Bethel S.D.
Raymond Mow, Erickson-McGovern Architects
Rob Van Slyke, Puget Sound School Coalition, WASA, Bethel S.D.
Craig Sedlacek, Labor and Industries, Factory Assembled Structures Plan Review
Grace Yuan, Puget Sound School Coalition, Legal Counsel
Suzanne Mayr, NW Regional Manager, National Fire Sprinkler Association
Traci Harvey, Fire Protection Engineer, Spokane Valley Fire Department
Tom Carver, OSPI

The agenda was approved as written.

Dave K. reviewed the purpose of the TAG, to gather information, develop proposed code language, and make recommendations to the Council. In his role as TAG Chair, he works toward consensus; he only votes if there is a tie. He expects participation from all TAG members and hopes to achieve consensus on the issues, i.e., all parties are all in agreement.

Whenever possible they try to bring information and groups that can bring the technical issues forward. We need to look at all proposed changes; on the issue of portable classrooms we will need to look back to the 1991 RCW on the issue; that language is a challenge for everyone. There have been many changes in the industry that manufactures portables, as well as the needs of school districts regarding the use of portable classrooms on a more widespread basis. It is encouraging that we now have the school districts involved, as well as L&I. It is critical to include other interested parties. Introductions of interested parties were made, with those present as noted above.

Dave noted that in 2013 the Council was asked for an interpretation on the issue of sprinklers in portable school classrooms; this question Interpretation in 2013 brought up the concerns of the

school districts. Council directed that the issues be addressed through a special tag, sponsored by the Fire Code TAG as the nucleus, with participation and in cooperation with school district personnel. This will be an educational process. We need to learn where the differences are, and how we can get closer together to address student safety in school buildings. Dave reviewed the history of the portable issue, presenting a ppt developed by Council staff.

Next Dave explained the role of the Council in the code adoption process and the makeup of the membership. We work with the legislature. Dave explained the code adoption process and introduced the role of the Council and the makeup of the membership. He noted we work with the legislature in terms of addressing policy issue. There is a legislative history regarding sprinklers in schools; in 1991 the legislature took action to ensur all new schools would have sprinklers; at that time the occupancies were classified E-1 under the Uniform codes; at the time portables were exempt. The issue of 'clusters' of these buildings came up in public hearings; this is one item that needs to be discussed among this group. There is a question of what the intent of the original language; the way it was written left room for interpretation.

Since the nature of portables has changed, they are different structures; they were smaller. There is a question of whether the 1991 definition still applies. If a portable classroom has an occupancy of more than 50, if a building has more than 50 it must be sprinklered. Many more districts now use more portables than were typically used in 1991, so what is the industry response? The direction from the Council is for the TAG to review this and find solutions. It is possible legislation may be needed, if rulemaking is unable to address it. Code change proposals are due to the Council by March 1. We may be able to do it in two or three meetings. Discussion of the issues is needed, need to consider the consequences. That proposed language would go through Council with public hearings in the fall. Normally it would be delayed, but could do this as an emergency rule if necessary. These go into the legislature as a consent item on their agenda; if no action is taken, then the rules are effective after the session. There is still opportunity to make changes through the TAG process, and the public hearings, then modifications can be made and adopted. That is our mission for resolution of these issues.

Craig S. from L&I shared background information on the magnitude of the issue; at L&I they do not advocate for one side or the other. He noted it has been difficult to understand the intent of the Council on the issue of portables. L&I reviews the construction plans for factory assembled buildings. They attach an approval label. It applies only to the work done in the factories; site work is inspected by the local officials. L&I is regulatory. They want to enforce the rules as adopted. He noted that 1000 to 2000 sq. ft buildings are common; not all are portables, many are actually intended to be permanent structures. There are separation issues and challenges for the non-portables, continuity is required. Different inspection agencies are responsible for the review. To maintain the rating of the fire assembly they must be carefully constructed. He noted that proper installation of the fire barrier wall makes the building less portable.

There are major challenges for protection of the fire barrier, e.g., inherently small gaps where the beams do not meet. Engineering judgment is needed. Relocation is an issue, as there will be remodeling may be needed as required by the Fire Code.

Traci H. noted that the issue of the barriers is understood, but the intent to be permanent does change this. It is a budget issue; if they are small enough - what is truly a portable? All children must attend school in safe structures.

Raymond Mow/architect noted we need to have a clear understanding of what is intended by a portable; this is much more complicated than it was in 1991. They should have direct exterior exiting, many have internal corridors. We need to expand the definition of portables and clarify this point.

Craig noted L&I has struggled with the issue of larger portables; those with internal corridors do not meet the intent of the building code; however when the local official approves it they will require the sprinklers.

Shawn S. Fire Services had a question for L&I regarding whether portables follow a typical repeatable floor plan. Craig noted that the vast majority do. Of the 700 in the last 10 years that were E occupancy 1,000 to 2,000 sq. ft., with 2 classrooms, total occupancy around 80 to 90. Shawn asked to clarify between the modular and the portable requirements. If L&I knew it would be installed as a permanent structure, then it would not be approved as a portable. Traci described the portables at issue in Spokane. Craig described the issues in Spokane and how L&I had handled that. Tracy noted these were different structures, a few years earlier were the two classroom buildings with one partition. L&I has been placed in the position of trying to interpret what is meant by the rules; they ask the SBCC for guidance. The limit of 50 is new to this code cycle. Dave explained how this language came about through the TAG. They determined that the 50 occupancy applied to the portables. All across the state the BOs were interpreting this differently.

Craig pointed out fire rated construction is called for when two are right next to each other. Shawn clarified it is a hard wall not the accordion wall; Craig noted they do not treat the accordion wall as a permanent partition; that is a single space. As the intent of the code is for fire barrier separation, that is not possible with the accordion wall.

Traci worked it out with a two-hour separation. They are fairly permanent in nature; Shawn asked about the city v. county definition re: exterior walls of the structure. Traci noted that the occupant load of the classrooms never reaches that threshold. Dave noted we adjusted the 2009 language, referring to the specific sq. ft. per person. We could review that. Traci noted there is a more interactive learning environment needed and expected in modern schools, different than classrooms of the past. This is due somewhat to changes in technology and the need to address that

Ray Mow noted the tables are okay, he agrees with the comments re; the learning environment and the need for interacting with the technology. He proposed we could use the issue of internal corridors as the threshold for sprinklers. He did a project for a music classroom, needed one space. Must consider the use of the space, is it vocational/non-vocational?

Shawn does not want to change the occupant load factor; he stated we need the ability to egress and that is dependent on the occupant load factor; would need to change egress patterns. Ray Mow agrees you would need two exits directly to the outside, rather than going to an internal corridor.

Jim H., Bethel School district, agreed that we don't use schools the way we did in the past. He looked at a model of 8000 students in a high school, this would certainly have certain unintended consequences.

Councilmember Rod Bault attended the meeting at his own volition, he noted that his interest is as the representative of the community of people with disabilities. He believes there should be two exits in portables; this is why he is here. If there is a student or teacher in a wheelchair, they must have access to a direct exit to the outside. It would be less of an impact to put a door in, rather than the wall. He has worked with schools and school safety and fire protection issues; he has been in several portable buildings. In his experience, he had a sense of regret if the activity was in a portable, as it was very challenging even in a non-emergency situation. As an individual with a disability, he would like to see the two exits included in the resolution of this issue, for the safest possible egress.

Grace Yuan encouraged the group discussion, noting that we need to do what we are doing now, keep discussing this. How will we do best with the process we have; we asked the Council to resolve this problem. Rob Van Slyke, Puget Sound School ,Coalition noted that the best option is to increase the number up to 100 occupants. Ray Mow pointed out it depends on the use of the building, districts should use the three standards as described by L&I. Craig noted that in the last 10 years they have approved about 70 classroom buildings that exceeded 2000 sq. ft. This rule affects the 1000 to 2000 sq ft. structures.

Traci noted we need to consider the threshold set by the legislature at 50 occupants. We don't want to loosen the standards to have a double standard. Ray Mow noted it is already in the RCW, and that exceptions have been allowed. We are talking portable v. permanent structure. When designing to code, one is aware that there may be differences in definition.

Kokot questions whether or not the portable definition is even relevant any longer. We are dealing with a definition that is already 21 years old. The structures have changed, normal is no longer what it once was. Structures are very expensive, and it is very hard in many districts to get the bond approval for permanent structures, so portables have become the solution by default. He looked and found that it is possible to order an entire school on-line. He agrees that what is needed is a new definition for today's structures of what is or is not a portable.

Shawn noted that modular buildings act like manufactured homes to some degree. He asked for information on whether they are coming in on a trailer and being lifted off when they get to the site. The chassis must be integral to the structure. We can get rid of the outliers. The definition for modular/portable still applies, based on chassis.

Craig notes that they will not approve anything other than an actual classroom. The chassis does not have to be permanent. When there is a transitory nature/need of the district then it is portable. This is not an issue for L&I if the local officials are looking at the installation on site.

Jim Hansen noted that in order to get the funding/state matching money, the school district must have 'unhoused' students; this is how they get their matching funds. Some districts have less of a match, driven by year to year needs. He has had hundreds of portables go through the process, it is not what the schools want but it is the way the process works in the state. It is because the school districts are pushed to this solution.

Rob Van Slyke, pointed out that the concern is safety in the event of a fire. Occupants must be able to get out of the facilities as quickly as possible. They have over 200 in his district, don't want them to be permanent, but they may stay on site longer than intended, they may be

permanently on site, but they are not permanent structures. He believes the focus should be ease of egress, that is how they should be set up.

Dave notes some trends and thoughts, and would like to talk about next steps. We will need to look at proposed language. This can be developed by TAG members, architects, anyone in the school districts and associated groups, we will consider anything that comes forward. We would like to encourage collaboration among school district reps, fire service staff; try to develop proposed draft language for the next meeting. Keeping L&I involved is very critical; the TAG could not have done this without the participation of all the parties here today. Dave does not have assignments to make, but wants the parties to communicate on the issues. The next TAG gathering with be in about two weeks from now, followed by a final meeting within the month.

Shawn asked Ray Mow his target number for occupant load; he is looking at around 140, but has other things to consider or prohibit. There are just a few issues to consider.

As Dave will not make assignments, he expects those who can get the work done will accomplish it, they had success in this regard with the PV TAG, we want to get common ground. Keith noted it is encouraging to hear the dialogue; we should appreciate the fact that people are willing to work together to resolve these issues.

Dave moved the agenda to discuss the emergency rule proposal from Spokane Valley Fire on emergency voice alarm systems. The fire alarm was a big impact from the 2012 code changes, as he found out when he began teaching the code update class. Now we are in the 2015 cycle, in the process of publication of the new code. The language has been revised, almost back to the 2009 language.

Emergency rule proposal would be to use the 2015 language immediately. The Council sent it back to the TAG for review. An emergency rule is in effect for 120 days, then it can be renewed.

Traci noted this change made no sense, it would add cost to the project for no benefit. The 2015 code caught the problem, and there were several proposals, she tracked them and developed this language. Dave noted the intent was good, but there was no justification. Voice is more of a consideration in schools, it is more critical than previously. There was a shooting in a Spokane school, the fire service was called in. Voice gives better communication in those situations. The initial intent is so that occupants know what it going on.

Rob V.S. noted that schools have that ability already, they have intercom; they develop protocols or guidelines as approved by local fire departments. They don't need to build in an expensive redundancy; we have clock and alarm systems that can meet these requirements. He asked if there some reason it has to be connected directly to the fire alarms system.

Shawn notes that there is a lack of information. When the systems first came on, those systems were adequate. There was redundancy; we are in overkill. The modern systems can use what is already in place. Older buildings may have a struggle, but the systems can be combined. Clear and consistent, there is no requirement for it to be legible. We can mix the systems together and it can be less expensive. Differences between school and medical systems; voice evac is not an

issue of evacuation but of relocation. This is something he does not think has to exist in portables.

Traci noted that the voice alarm issue came from the national level; it was modified in 2015, just to change the threshold. Voice alarms are coming, it really can't be stopped. The emergency rule is just to adopt the 2015 language to have the different threshold.

Jim Kambietz agrees with this; we should go with what the next code is going to have in place. If you have a larger school you should put in both systems.

Rob V.S. appreciates the clarification on the issue, no duplication is needed; he now understands if the school was being renovated substantially then they would need to bring it up to the new standards. Shawn noted that there may be older schools that need an upgrade when technology changes require it. There can be savings for the school district in his analysis. He proposed that they accept the proposal by Tracy as written.

Rob asked for clarification, they have a site that will bring in 3 portables; they have the emergency voice capability; does that trigger the requirement for the new voice alarm? Ray asked how to take an existing intercom system and make it work with another system? How to tie the two systems together; that seems to need more information. Shawn noted it is being confused; the fire alarm systems are now allowed to have these components in them. Dave noted we are only talking new construction, there are multiple uses. Discussion of emergency situations, hazards in the building that may require staying inside rather than evacuation; the communication has to be clear.

Rob noted he's still a little confused. By adding one portable, that has an intercom system, already has lockdown in place, no automatic evacuation. The intercom is not tied to the fire alarm system, they get on a mic and inform the occupants. If he adds a portable, does he need to add the emergency voice alarms system? He is concerned about redundancy.

Tracy noted only the portable would be required to have the new system. The purpose is that no person needs to give the information. It could have its own panel specifically for the portable, not tied to the school building. They could do it either way if the school wants them to be connected for communication purposes.

Mike - Simplex Grinnel in Spokane noted the voice portion is simply an amplifier, they would still need visuals for hearing impaired occupants; they would also have microphones. Ryan F. clarify the issue around flexibility; Dave K. noted that there is a need for specific instruction during an emergency. He noted that occupants are more likely to evacuate if they hear a voice rather than an alarm signal.

It can be used for everything. Ryan noted we are not educating the kids, but the teachers. Does the intercom provide that flexibility, and/or does the fire alarm system provide that? Dave notes the fire alarm system takes control of the intercom system. Ryan wants to know what the role of the office staff is, they are not to wait for a message, they are expected to evacuate once notified. Dave notes the system is used for other things, e.g, a gas explosion; they need to keep occupants safe, sheltered in place or outside the building depending on the situation. Ryan asked about Bethel's example, i.e., how to communicate to both sides of the house. Shawn suggested we should just ignore the portable issue, it is a school upgrade. It must have a good

level of communication with the fire alarm company before the project even begins. If it is left until later, it creates a bigger problem, it must happen early in the project planning phase. During construction you may have two systems operating.

There may be confusion about the response depending on the nature of the emergency. When the alarm goes off the evacuation happens; it will be difficult to get that change in culture. Dave asked if everyone does the same thing every time, they need to mix up the scenario. Need to practice many scenarios to be adequately prepared for a true emergency situation.

Which system is used to notify the occupants; emergency voice or intercom? Under the new system it is all one. Staff should follow specific instructions depending on where the issue is located. Shawn noted we are raising the threshold in this proposal.

Grace notes they support the amendment; it has been an issue for schools. They need a vehicle, perhaps an interpretation, that this is only required for new schools; they want to be clear what a major modification is. Some schools are actually larger, campus-like sites with many buildings. This means they would only apply it to the part of the campus that is being modified.

Dave notes we need to get the word out. It is not meant for existing buildings. Grace noted there are huge capital investments they must make with the law enforcement issues, and all of the direction they are giving students/staff, so they want to be clear.

Dave asked if we have consensus from TAG members; if anyone on TAG has a problem speak now. All are in favor of the proposal. We will move this forward.

February 7th is the next TAG meeting.

Keith Merritt noted that WASPC will also want to provide guidance to schools; they have a meeting on February 6. They will work with the affected agencies to ensure there is robust communication with schools.

Dave asked that for the next TAG meeting that participants bring the proposed language for the portable issue. It is possible that there could be a request for an emergency rule if it meets the requirements/criteria. If we need to modify the RCW we would need to do that in the next legislative session in 2015, depending on the nature of the changes.

Rob thanked Dave for the opportunity to have schools participate. Dave noted there is also appreciation from the Council, for the participation from this community of interest. Rod Bault asked whether the ESDs have staff assigned to these issues; there is not much, but this comes up in the school coalitions and other interest groups, that is where the issues are recognized and discussed.

Architects and engineers are also involved in these issues; they are a part of the education community. Shawn talked about deferred submittal, which is what they have done previously. Now it is moving to the front of the project, that saves money in the project. Ray noted in design/build situations it may not always be so.

Meeting adjourned at 1:10 p.m.